

Application No. 10/538,078  
Amendment dated July 28, 2008  
After Final Office Action of January 28, 2008

Docket No.: 3449-0500PUS1

**REMARKS**

Applicant thanks the Examiner for the very thorough consideration given the present application. In view of the above amendment, applicant believes the pending application is in condition for allowance.

Claims 1-12, 14 and 16-18 are now present in this application. Claims 1, 10 and 16 are independent.

Claims 16-18 have been added, and claims 1 and 10 have been amended. Reconsideration of this application, as amended, is respectfully requested.

**Rejections Under 35 U.S.C. §§ 102 & 103**

Claims 1, 5-10 and 12-15 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Tanaka (JP 11-354840) in view of Tanaka (phys. Stat. Sol) and Tanaka (JJAP). Claims 8 and 13 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Hoon. Claims 2-4 and 11 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Tanaka (JP 11-354840) in view of Tanaka (JP 11-354839). These rejections are respectfully traversed.

It is respectfully noted that the 35 U.S.C. § 102(b) rejection on claims 1, 5-10 and 12-15 is in fact a 35 U.S.C. § 103(a) rejection since the Office Action combined three references to issue the rejection. Clarification regarding this matter is respectfully requested.

A complete discussion of the Examiner's rejection is set forth in the Office Action, and is not being repeated here.

Independent claim 1 has been amended to further recite, among other features, the p-type semiconductor layer is contacted with the quantum dots, or both the n-type semiconductor layer and the p-type semiconductor layer are contacted with the quantum dots. Independent claim 10 has been amended to include the similar features in a varying scope.

This feature is supported at least by FIG. 2 of the present application. For example, at the p-type semiconductor layer 14 is contacted with the quantum dots 132, or both the n-type semiconductor layer 12 and the p-type semiconductor layer 14 are contacted with the quantum dots 132 (see FIG. 2 of the present application).

Application No. 10/538,078  
Amendment dated July 28, 2008  
After Final Office Action of January 28, 2008

Docket No.: 3449-0500PUS1

Tanaka (JP 11-354840) teaches that the n-type semiconductor B is contacted with the quantum dots d, but the p-type semiconductor 4 is not contacted with the quantum dots d (see FIG. 3 of JP 11-354840). Similarly, Tanaka (JP-354839) teaches that n-type layer A is contacted with the quantum dots d1, but the p-type layer 4 is not contacted with any of the quantum dots (see Fig.1 of JP-354839). Further, Hoon et al. also shows that n-type semiconductor 74 is contacted with the quantum dots 80 (see FIG. 10 of Hoon et al.). In addition, neither Tanaka (phys. Stat. Sol) nor Tanaka (JJAP) teaches that a p-type semiconductor is contacted with quantum dots. Therefore, the cited references fail to teach or suggest that the p-type semiconductor layer is contacted with the quantum dots, or both the n-type semiconductor layer and the p-type semiconductor layer are contacted with the quantum dots, as recited in amended independent claims 1 and 10.

Accordingly, it is respectfully submitted amended independent claims 1 and 10, and each of the claims depending therefrom are allowable.

#### Claims Added

Claims 16-18 have been added to set forth the invention in a varying scope, and Applicants respectfully submit the new claims are fully supported by the originally filed application.

It is respectfully submitted the new claims further define over the applied art.

#### Conclusion

All of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicant therefore respectfully requests that the Examiner reconsider all presently outstanding rejections and that they be withdrawn. It is believed that a full and complete response has been made to the outstanding Office Action, and as such, the present application is in condition for allowance.

If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to telephone Jun S. Ha, Registration No. 58,508, at (703) 205-8000, in the Washington, D.C. area.

Application No. 10/538,078  
Amendment dated July 28, 2008  
After Final Office Action of January 28, 2008

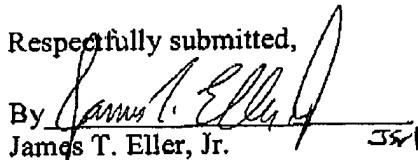
Docket No.: 3449-0500PUS1

Prompt and favorable consideration of this Amendment is respectfully requested.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17; particularly, extension of time fees.

Dated: July 28, 2008

Respectfully submitted,

By   
James T. Eller, Jr.

Registration No.: 39,538  
BIRCH, STEWART, KOLASCH & BIRCH, LLP  
8110 Gatehouse Road  
Suite 100 East  
P.O. Box 747  
Falls Church, Virginia 22040-0747  
(703) 205-8000  
Attorney for Applicant